A.D. 1869, 15*th* APRIL. N° 1165.

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Bottles and Jars.

LETTERS PATENT to Aaron White Cook Williams, of Bridgeport, Connecticut, United States of America, now of No. 8, Southampton Buildings, Chancery Lane, in the County of Middlesex, for the Invention of "IMPROVEMENTS IN BOTTLES AND JARS FOR PRESERVING FRUIT AND OTHER SUBSTANCES, AND IN STOPPERS FOR THE SAME."

Sealed the 2nd October 1869, and dated the 15th April 1869.

PROVISIONAL SPECIFICATION left by the said Aaron White Cook Williams at the Office of the Commissioners of Patents, with his Petition, on the 15th April 1869.

I, AARON WHITE COOK WILLIAMS, of Bridgeport, Connecticut, United States of America, now of No. 8, Southampton Buildings, Chancery Lane, in the County of Middlesex, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN BOTTLES AND JARS FOR PRESERVING FRUIT AND OTHER SUBSTANCES, AND IN STOPPERS FOR THE SAME," to be as follows:—

The main object of the said Invention is to provide a bottle or jar for containing fruit, vegetables, meat, pickles, and other substances,

with means whereby it may be hermetically sealed and secured so as to effectually preserve its contents for any desired length of time.

The bottle or jar is constructed with an exterior flange or shoulder surrounding the aperture, and within this flange is a vertical rim or collar. Around or over this collar I place a flat ring of india-rubber or other elastic material, which lies upon the flange, and immediately under the latter is a groove or channel. The said groove is formed to receive a metal ring, which is made in two halves to allow it to be placed in this groove around the neck of the bottle or jar. The two halves of the metal ring are provided with studs which when the said two halves are united upon the bottle form the means whereby they are secured together. The object of this ring with its projecting studs is to furnish the pivot or fulcrum for an adjustable yoke which extends across the mouth of the bottle to secure the stopper or cover thereon, and the said yoke is fitted to turn upon the studs of the ring, so that it may be conveniently adjusted to secure or release the stopper. The latter, which may be formed of porcelain, glass, or metal, has a rim which projects over the rim at the top of the bottle, and rests upon the elastic ring surrounding the same. On the top of the stopper or cover, and extending nearly across the same, I form a projecting piece over which when the stopper is to be secured the yoke is turned. The said projection is of a convenient form to be taken hold of, and forms the means for adjusting or removing the stopper. Though I prefer to use the divided metal ring for holding the yoke, the latter may be connected to the bottle by any convenient means which will allow it to be adjusted to secure and release the stopper. When the bottle or jar has been properly filled with the fruit, pickles, or other substance to be preserved a little clear water, syrup, or other liquid is added, and the stopper is placed loosely on the top, with its rim or edge resting upon the elastic ring. The bottle is then placed in a boiler or other vessel containing water, which is heated gradually (care being taken to prevent the contact of the bottom of the bottle with the bottom of the boiler), and by the heat communicated from the boiler the air, or the greater portion thereof, is expelled from the bottle, the stopper allowing it to escape, but preventing the return of any air into the bottle. The bottle is then removed from the vessel containing the hot water, and allowed to cool, and if proper care has been taken the stopper will be securely held on the bottle by the external atmospheric pressure. In practice it is better to let the bottle stand for some hours, so that if

through any imperfections in the bottle or stopper, or through want of care in conducting the operation, the bottle should not have been made properly air-tight it may be immediately detected, and without injury to the fruit or other contents of the bottle or jar the same may be again heated and properly secured. When there remains no doubt with regard to the perfect closing or sealing of the bottle or jar the yoke is turned up over the projection on the stopper which is slightly inclined to allow the yoke to be more conveniently adjusted. By this means all liability of the accidental displacement of the stopper is prevented, and its security is rendered practically perfect; the yoke also forms a convenient handle for the bottle or jar. When it is desired to open the bottle or jar the yoke is turned down away from the stopper, and by simply pulling one side of the elastic ring from between the stopper and flange air is admitted to the bottle or jar, and the stopper is released. The said elastic ring is preferably widened on one side to project beyond the flange, so that it may be conveniently pulled from between the same and the stopper, as above described. Though I prefer to use bottles or jars constructed with an exterior flange as hereinbefore described, yet if desired my improved stopper may be applied to bottles or jars formed with a flange on the inside of the mouth of the same, a portion of the elastic ring being then allowed to project through an aperture at the side of the flange.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Aaron White Cook Williams in the Great Seal Patent Office on the 9th October 1869.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, Aaron White Cook Williams, of Bridgeport, Connecticut, United States of America, now of No. 8, Southampton Buildings, Chancery Lane, in the County of Middlesex, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Fifteenth day of April, in the year of our Lord One thousand eight hundred and sixty-nine, in the thirty-second year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Aaron White Cook Williams, Her special licence that I, the said Aaron White Cook Williams, my executors,

administrators, and assigns, or such others as I, the said Aaron White Cook Williams, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN BOTTLES AND JARS FOR PRESERVING FRUIT AND OTHER SUBSTANCES, AND IN STOPPERS FOR THE SAME," upon the condition (amongst others) that I, the said Aaron White Cook Williams, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Aaron White Cook Williams, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the accompanying Drawing forming a part of this Specification:—

The main object of the said Invention is to provide a bottle, jar, or other vessel for containing fruit, vegetables, meat, pickles, and other substances with means whereby it may be hermetically sealed and secured so as to effectually preserve its contents for any desired length of time.

DESCRIPTION OF THE DRAWING.

Figure 1 is a central vertical section of my improved bottle and stopper; Figure 2 is a top view of the bottle with the stopper removed; Figure 3 is a plan of the said stopper; Figure 4 is a detached portion of the device for securing the same. Like letters indicate the same parts throughout the Drawing.

The bottle or jar *a* is constructed with an exterior flange or shoulder *b* surrounding the aperture or mouth, and within this flange is a vertical rim or collar *c*. Around or over this collar I place a flat ring *d* of india-rubber or other elastic material, which lies upon the flange *b*, and immediately under the latter is a groove or channel *e*. The said groove is formed to receive a metal ring *f*, which is made in two halves to

allow it to be placed in this groove around the neck of the bottle or jar. The two halves of the metal ring *f* are provided with studs f^1, which when the said two halves are united upon the bottle form the means whereby they are secured together. The object of this ring *f* with its projecting studs f^1 is to furnish the bottle with a pivot or fulcrum for an adjustable yoke *g* which extends across the mouth of the bottle to secure the lid or cover *h* thereon, and the said yoke is fitted to turnupon the studs f^1 of the ring *f*, so that it may be conveniently adjusted to secure or release the cover *h*. The latter, which may be formed of porcelain, glass, or metal, has a rim h^1 which projects over the rim *c* at the top of the bottle and rests upon the elastic ring *d* surrounding the same. On the top of the lid or cover *h*, and extending nearly across the same, I form a flat projecting piece h^2, over which when the stopper is to be secured the yoke *g* is turned, as shown in Figure 1. The said projection is of a convenient size and shape to be taken hold of, and forms the means for adjusting or removing the stopper. Though I prefer to use the divided metal ring *f* for holding the yoke *g* the latter may be connected to the bottle *a* by any convenient means which will allow it to be adjusted to secure and release the cover *h*. When the bottle or jar has been properly filled with the fruit, pickles, or other substance to be preserved a little clear water, syrup, or other liquid is added, and the cover placed loosely on the top with its rim or edge h^1 resting upon the elastic ring *d*. The bottle is then placed in a boiler or other vessel containing water, which is gradually heated (care being taken to prevent the contact of the bottom of the bottle with the bottom of the boiler), and by the heat communicated from the water in the boiler the air, or the greater portion thereof, is expelled from the bottle, the cover *h* allowing it to escape, but preventing the return of any air into the bottle. The bottle is then removed from the vessel containing the hot water, and allowed to cool, and if proper care has been taken the cover *h* will be securely held on the bottle by the external atmospheric pressure. In practice it is better to let the bottle stand for some hours, so that if through any imperfections in the bottle or stopper, or through want of care in conducting the operation, the bottle should not have been made properly air-tight, the fault may be immediately detected, and without injury to the fruit or other contents of the bottle or jar the same may be again heated and properly secured. When there remains no doubt with regard to the

perfect closing or sealing of the bottle or jar the yoke *g* is turned up over the projection h^2 on the cover *h*, which is slightly inclined to allow the yoke to be more conveniently adjusted. By this means all liability of the accidental displacement of the stopper is prevented, and its security is rendered practically perfect; the yoke also forms a convenient handle for the bottle or jar. When it is desired to open the bottle or jar the yoke *g* is turned down away from the stopper, as in Figure 2, and by simply pulling one side of the elastic ring *d* from between the cover *h* and flange *b* air is admitted to the bottle or jar, and the cover is released. The said elastic ring is preferably widened on one side, as shown, to project beyond the flange, so that it may be conveniently pulled from between the same and the cover, as above described. Though I prefer to use bottles or jars constructed with an exterior flange, as herein-before described, yet if desired my improved stopper may be applied to bottles or jars formed with a flange inside the mouth of the same, a portion of the elastic ring being then allowed to project through an aperture at the side of the flange.

My improved stopper may be applied to cans and other vessels made of tin or other metal as well as to glass and earthenware jars and bottles.

Having thus fully described my said Invention, and shown how the same may be conveniently and advantageously carried into practice, I claim,—

First. Constructing a jar or bottle *a* with a flat shoulder *b* outside of the vertical rim or collar *c* which surrounds the mouth or aperture, and with a groove or channel *e*, substantially as and for the purposes set forth.

Second. The jar or bottle *a*, the cover *h*, elastic ring *d*, metal ring *f* made in two parts, and adjustable yoke *g* fitted on the pivots f^1, constructed and combined together substantially as and for the purposes set forth.

Third. The lid or cover *h* with the projecting rim h^1 and projecting piece h^2 applied to the mouth of a jar or bottle or other vessel which has a rim or flange to receive a ring of india-rubber or other material suitable to form an air-tight seat for the said flange, and which jar or

bottle is also provided with means for holding the said cover down upon its seat, substantially as set forth.

In witness whereof, I, the said Aaron White Cook Williams, have hereunto set my hand and seal, this Seventh day of October, in the year of our Lord One thousand eight hundred and sixty-nine.

AARON W. C. WILLIAMS. (L.S.)

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
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A.D. 1869. April 5. N° 1165.
WILLIAMS' Specification.

(1 SHEET)

FIG. 1.

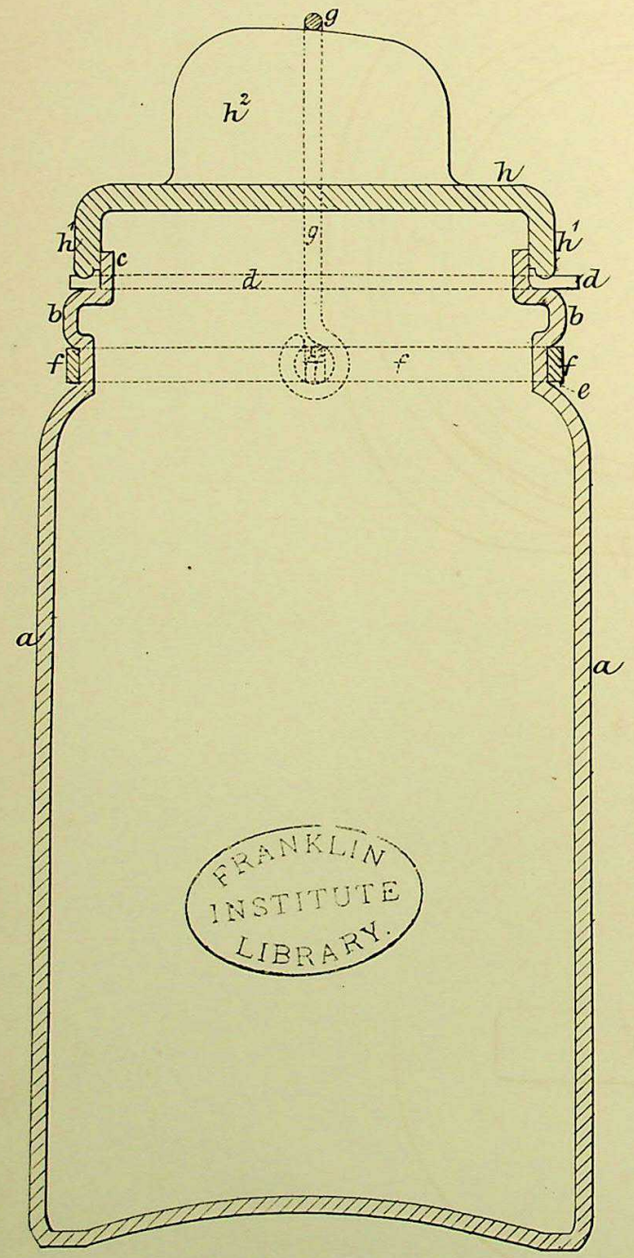

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FIG. 2.

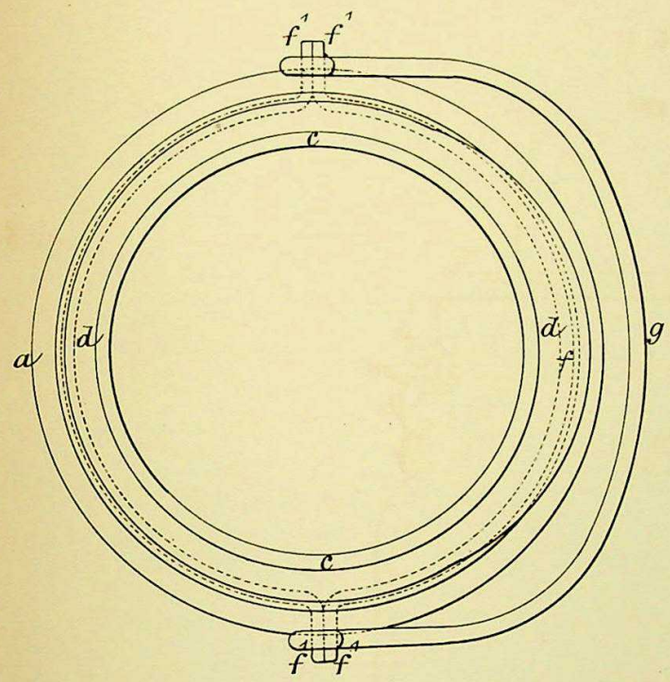


FIG. 4.

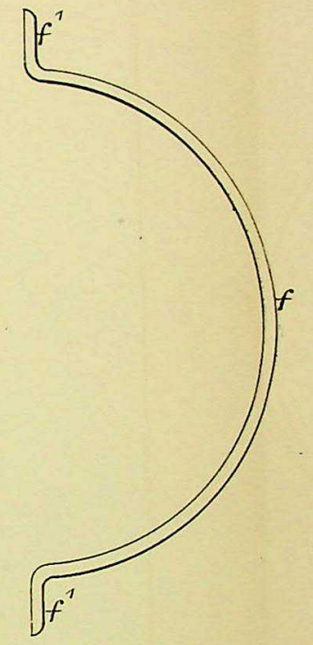
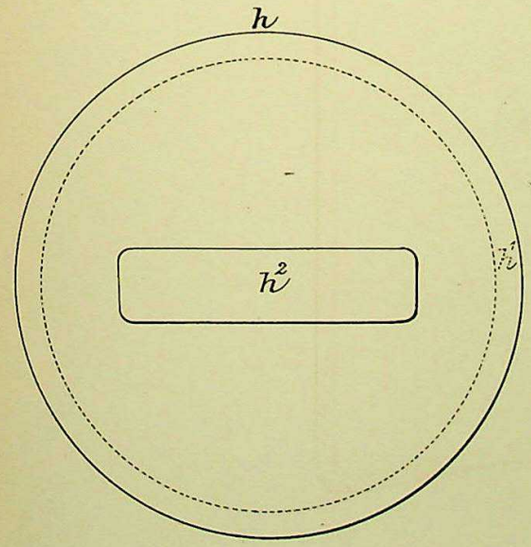


FIG. 3.



The filed drawing is partly colored.

Drawn on Stone by Malby & Sons

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